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**The effects of CPC 47 on earnings management in companies listed in B3****Efectos del CPC 47 en la gestión de resultados de las empresas que cotizan en la B3****Efeitos do CPC 47 no gerenciamento de resultados das empresas listadas na B3****Authors****André Lamblet Dias**

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### Abstract

**Purpose:** The objective of this study is to analyze the effects of adopting CPC 47 on the level of the earnings management of companies listed in the Brazilian capital market.

**Methodology:** The sample used in this study is composed of 207 companies listed in B3 in the observation period 2012-2021 totaling 2070 observations. The approach is quantitative, using multiple linear regression with balanced panel data. Dechow, Hutton, Kim and Sloan (2012) and Kothari, Leone and Wasley (2005) models were used to improve the discretionary accruals and an earnings management model with control and interest variables.

**Results:** The results did not confirm the hypothesis that the adoption of CPC 47 affected the level of results management in the analyzed period but showed that indebtedness and operating cash flow explain discretionary accruals, regardless of the adoption of the pattern of revenue recognition. This evidence about earnings management increased with the adoption of CPC 47 was contrary to Baldissera, Gomes, Zanchet and Fiirst (2018), however, according to the findings of Grecco (2013), Jewel and Nakao (2014) and Braga (2020) in relation to the effects of accounting standards. The results indicate that companies with higher operating cash flow can generate accounting information with better quality regardless of the effects of the adoption of CPC 47. The period of the coronavirus pandemic did not significantly affect earnings management levels.

**Contributions of the Study:** As a contribution, the study expands the theoretical knowledge about the effects of CPC 47 on earnings management. Additionally, in a practical way, it collaborates with regulatory organs, auditors, executives, stakeholders, and the financial market in general.

**Keywords:** Revenue from Contracts with Customers. Earnings Quality. Earnings Management.

### Resumen

**Objetivo:** El objetivo del estudio fue analizar los efectos de la adopción del Pronunciamiento Técnico CPC47 en el nivel de gestión de resultados de las empresas listadas en el mercado de capitales brasileño.

**Metodología:** La muestra de estudio está compuesta por 207 empresas que cotizan en la B3 en el periodo de observación 2012-2021, totalizando 2070 observaciones. Es una descripción descriptiva, utilizando una combinación de equipo mecánico con datos de panel. Se utilizó los modelos Dechow, Hutton, Kim and Sloan (2012) and Kothari, Leone and Wasley (2005) para mejorar los devengos discrecionales y un modelo de gestión de ganancias con variables de control e interés.

**Resultados:** Los resultados no confirmaron la hipótesis de que la adopción del CPC 47 afectó el nivel de gestión de resultados en el período analizado, pero mostraron que el endeudamiento y el flujo de caja operativo explican las provisiones discrecionales, independientemente de la adopción de la norma de reconocimiento de ingresos. Esta evidencia sobre un aumento en la gestión de ganancias con la adopción de CPC 47 fue en la dirección opuesta de las notas de Baldissera, Gomes, Zanchet e Fiirst, (2018), sin embargo, está de acuerdo con los hallazgos de

Grecco (2013), Joia y Nakao (2014) y Braga (2020) sobre los efectos de las normas contables. Los resultados indican que las empresas con mayor flujo de efectivo operativo pueden generar información contable de mejor calidad, independientemente de los efectos de la adopción de CPC 47. El período de la pandemia de coronavirus no afectó significativamente los niveles de gestión de ganancias.

**Contribuciones del Estudio:** Como aporte, el estudio amplía el conocimiento teórico sobre los efectos del CPC 47 en la gestión de resultados. Adicionalmente, de manera práctica, colabora con organismos reguladores, preparadores de los estados financieros, auditores, ejecutivos y accionistas controladores y el mercado en general.

**Palabras clave:** Ingresos de Contratos con Clientes. Calidad de la Información Contable. Gestión de Resultados.

### Resumo

**Objetivo:** O objetivo do estudo foi analisar os efeitos da adoção do Pronunciamento Técnico CPC 47 no nível do gerenciamento de resultados das empresas listadas no mercado brasileiro de capitais.

**Metodologia:** A amostra do estudo é composta por 207 empresas brasileiras listadas na B3 no período de 2012 a 2021, totalizando 2070 observações. Trata-se de uma pesquisa descritiva com abordagem quantitativa, utilizando-se regressão linear múltipla com dados em painel. Utilizou-se os modelos de Dechow, Hutton, Kim e Sloan (2012) e Kothari, Leone e Wasley (2005) para apurar os *accruals* discricionários e um modelo de gerenciamento de resultados com variáveis de controle e interesse.

**Resultados:** Os resultados não confirmaram a hipótese de que a adoção do CPC 47 afetou o nível de gerenciamento de resultados no período analisado, porém evidenciaram que o endividamento e o fluxo de caixa operacional explicam os *accruals* discricionários, independente da adoção do padrão de reconhecimento de receitas. Esse apontamento sobre aumento de gerenciamento de resultados com adoção do CPC 47 foi em direção contrária aos apontamentos de Baldissera, Gomes, Zanchet e Fiirst (2018), no entanto, está de acordo os achados de Grecco (2013), Joia e Nakao (2014) e Braga (2020) em relação aos efeitos das normas contábeis. Os resultados apontam que empresas com maior fluxo de caixa operacional podem gerar informações contábeis com melhor qualidade independentemente dos efeitos da adoção do CPC 47. O período da pandemia do coronavírus não afetou significativamente os níveis de *earnings management*.

**Contribuições do Estudo:** Como contribuição, o estudo amplia o conhecimento teórico sobre os efeitos do CPC 47 nas práticas de *earnings management*. Adicionalmente, de forma prática, colabora com órgãos reguladores, preparadores das demonstrações contábeis, auditores, executivos e acionistas controladores e o mercado em geral.

**Palavras-chave:** Receita de Contrato com Cliente. Qualidade da Informação Contábil. Gerenciamento de Resultados.

## 1 Introduction

In May of 2014, the International Accounting Standards Board (IASB) issued a new accounting standard for financial reporting called International Financial Reporting Standards (IFRS) 15 "Revenue from contracts with customers", the result of a convergence project with the Financial Accounting Standards Board (FASB).

The new standard provides the companies a five-step revenue recognition model that applies for a contract with a customer. This new accounting standard constitutes an important stage of global convergence and represents a significant procedure in the earnings quality (Mota, Campos, Niyama & Paulo, 2012).

The IASB (2014) and the FASB argue that the new standard improves the comparability of revenue in financial statements, and therefore, eliminates deficiencies identified in previous standards, as it is more complete in relation to the recognition, measurement, and disclosure of revenue (Church, 2016). The IASB (2014) clarifies that the previous standard had limitations on important items, such as the accounting recognition of contracts with several elements together.

There are studies in the Brazilian literature and in other countries that highlight the effects of applying the new standard with recommendations on accounting policies (Dalkilic, 2014), in the analysis of indirect effects (Rutledge, Karin & Kim, 2016), in the relevance of early adoption (Dani, Santos, Panucci, Filho & Klann, 2017; Trabelsi, 2018), in the value relevance (Altaji & Alokdeh, 2019; Braga, Santos & Nascimento, 2022; Onie, Ma, Spiropoulos & Wells, 2022), in the earnings management (Tutino, Regoliosi, Mattei, Paoloni & Pompili, 2019), and revenue management (Braga, 2020; Morawska, 2021).

The accounting criteria and standards chosen by the company can influence the quality of the financial statements, when unreliably applied by the information preparers (Fields, Lys & Vincent, 2001; Paulo, 2007). Thus, the motivation for not disclosing the real performance of companies may be associated with the interests of managers or the company, such as, for example, increasing profits and choosing inappropriate accounting standards (Paulo, 2007).

In this sense, studies also point out that the impacts of applying the new standard can generate some negative consequences (Rutledge et al., 2016, Piosik, 2021), such as a possible increase in the practice of earnings management and, therefore, manipulation of financial reports (Piosik, 2021). According to Veysey (2020), based on the new revenue recognition standard, it is possible to obtain different responses for the same transaction and contractual structure. These gaps are obstacles for the standard-setter because there are several sectors and business models with different operations and characteristics (Napier & Stadler, 2020).

Healy and Wahlen (1999) define the manipulation of accounting information as earnings management, and this occurs when managers practice discretionary actions on the actual financial performance of companies. Earnings quality can be affected by this discretion over the timing of revenue recognition (Rutledge et al., 2016) and can be influenced by judgments and estimates that need to be updated.

Therefore, possible new adjustments to the financial statements are made by changes in estimates in subsequent periods (Cova, 2015). The adoption of the new standard depends more on the professional, since it requires more judgment from managers and preparers of financial statements (Dalkilic, 2014).

Joia and Nakao (2014) argued that the increase in quality and transparency combined with greater comparability of financial statements leads to a reduction in information asymmetry. Therefore, the adoption of accounting standards should have an impact on the earnings management of companies to reduce it (Barth, Landsman & Lang, 2008).

However, the results of the study by Joia and Nakao (2014) did not confirm the hypothesis that companies' adoption of IFRS affected the level of earnings management, although there was a reduction in discretionary accruals after IFRS. In contrast, Braga (2020) and Tutino et al. (2019) identified an increase in earnings management. The context presented reveals a contradictory scenario with gaps in relation to the consequences of implementing the new accounting standard.

There are studies in the literature that propose models to measure the manipulation of accounting information (Dechow, Sloan & Sweeney, 1995; Kang & Sivaramakrishnan, 1995; Kothari et al., 2005; Dechow et al., 2012). Other studies have addressed the effect of earnings management on the earnings quality (Martinez, 2001; Cardoso, 2005; Almeida, 2010).

According to Rutledge et al. (2016), there is a need to evaluate the effects brought by the new accounting standard as a possible increase in the practice of earnings management and, therefore, manipulation of financial reports. The following research problem presented itself: **What effects does the adoption of Technical Pronouncement CPC 47 have on the earnings management level of Brazilian companies listed on B3?**

To answer this question, the main objective of the research is to analyze the effect of the level of earnings management with the adoption of CPC 47 in companies listed on B3. The evaluation of these effects becomes important to understand the reflections in the informational content after the adoption of the new standard.

The research contributes and expands discussions with the aim of improving understanding of the effects of CPC 47 on earnings management practices and their impact on the quality of accounting information. Furthermore, according to Lourenço and Branco (2015), the adoption of IFRS has been one of the most analyzed and addressed topics in research in the field of accounting, given its relevance, collaborating with regulatory bodies, preparers of financial statements, auditors, executives and controlling stakeholders and the market in general.

## 2 Literature Review

### 2.1 Earnings Quality and Earnings Management

The adoption of IFRS worldwide is a change with a strong economic impact. From it, new opportunities for research in accounting emerged, since changes in standards directly influence the quality of financial statements (Lourenço & Branco, 2015). According to Ball (2006), a system based on the IFRS standard provides better quality financial information and mitigates the discretion that other standards provide to managers.

The quality of accounting information can be associated with greater relevance and faithful representation, as it facilitates the dissemination of reliable information that will help external users in decision-making (Colauto, Moreira, Bispo & Angotti, 2010). According to Martinez (2001), transparent and reliable accounting is the foundation in the capital market.

According to Cappellesso, Niyama and Rodrigues (2021) earnings quality are necessary for accounting to fulfill its role of disseminating information. The quality attribute of accounting information will be greater, the smaller the information asymmetry, improving the informational content, capable of assisting managers, investors, analysts, among others in their economic transactions (Duarte & Lucena, 2018).

There is no specific term that defines the quality of accounting information. earnings quality can be defined as information that provides more information about the financial performance of a company, and that is relevant for decision making by a given decision maker.

There are three major groups of proxies for accounting information quality: earnings properties, investor responsiveness to earnings, and external indicators of earnings distortion. Therefore, the quality of accounting information can be measured based on several metrics, one of which is earnings management (Dechow, Ge & Schrand, 2010).

Earnings management occurs when administrators judge financial information and operating activities to modify financial reports to manipulate some investors about the company's performance or to encourage contractual results that depend on reported accounting numbers (Healy & Wahlen, 1999). With this, managers can choose according to the benefits they will have when reporting a certain result (Martinez, 2001).

An important point is that the subjectivity of accounting standards can be used to meet the purposes of the company's economic reality, or other specific ones. According to the authors Fields et al. (2001), the use of earnings management can include accounting choices, which originate from decisions taken with the aim of influencing the information generated by the accounting system, such as financial statements, and other fiscal and regulatory reports. Even though these decisions may violate accounting principles and constitute fraud, earnings management can occur within the limits of these principles (Dechow & Skinner, 2000).

For Almeida (2010), it is possible that the manager can manage accounting information to reduce risks or confuse users, however, both situations seek greater disclosure of results that more faithfully portray the reality of transactions. Given this, it is understood that earnings management is not fraud, as managers' choices may be within the limits defined in accounting standards.

According to Martinez (2013), earnings management can be used in specific situations with a positive nature, however, it is recognized that such a practice at its extreme is a fine line with fraud. Differentiating this frontier is a challenge, given that there is still a gap in the academic literature, as the concept of fraud is associated with the intention to conceal (Martinez, 2013).

Many authors argue that the new accounting standards allow new methods of recognition, measurement, and disclosure, evidencing the great importance of accounting in the communication of information. However, because auditing is imperfect, administrators may see the exercise of judgment as an opportunity to manage results, and therefore make accounting choices that do not match the company's economic situation (Healy & Wahlen, 1999).

Earnings management definitions are guided by managerial intentions, which are often not easy to observe. There are different types of management based on motivations: Target Earnings is management practiced with the objective of “increasing (improving) or decreasing (worse) accounting results”; while Income Smoothing seeks to reduce variation in results and Big Bath Accounting aims to “manage to reduce current profit in order to increase future profit” (Martinez, 2001, p. 43).

Regarding incentives for the practice of earnings management, contractual, market and regulatory incentives should be considered (Almeida & Almeida, 2009), which are presented in table 1.

**Table 1***Types of incentives*

Incentives	Types
Contractual	Debt covenants, executive compensation, job security and bilateral agreements.
Market	Ratio of profit and firm value, Initial Public Offering (IPO), litigation, analyst forecast, growth.
Regulatory	Political factors, industry rules, agencies, antitrust policies, fiscal and tax aspects.

**Source:** Information retrieved from Almeida and Almeida (2009).

Almeida (2010) states that one of the earnings management practices is through decisions about accruals, which will be analyzed in this study. According to Lopes and Martins (2005), accruals store the accounting information content and are characterized as accumulations represented by the discrepancy between net income and net operating cash flow. Therefore, it must be considered that all classifications of results are computed to profit and that do not cause changes in cash or cash equivalents.

The purpose of accruals is to represent earnings in an economic way. However, one can consider the fact that the manager can make decisions in a way that motivates discretion, increasing or decreasing the levels or effect of accruals. The manager can manipulate earnings for reasons inconsistent with the business. It is noteworthy that accruals can be both discretionary and non-discretionary (Martinez, 2008).

The difference between them is that the non-discretionary ones are associated with the company's normal business activity, while the discretionary ones relate to the decision that the manager can make to generate expected effects on the accounting results (Moreira, 2006; Paulo, 2007), in addition to being used as a proxy for earnings management. If positive, they reveal that the result is being managed to be improved, if negative, to be worsened (Martinez, 2008).

In addition, as clarified in the study by Paulo (2007), problems arise in measuring these discretionary accruals, as this occurs because this portion of accruals is estimated, that is, not observable. Dechow et al. (1995) had already indicated this type of difficulty in the evaluation.

Almeida (2010) states that accruals are one of the variables most analyzed by scholars as a proxy for the quality of accounting information. Profit can be formed by the combination of different accounting choices, policies, and estimates, which makes its composition subjective. Therefore, the relevance of bringing its quality as an object of analysis, so that it is plausible to understand the reasons and incentives of the practices that involve its measurement.

For Martinez (2013), interfering with accounting numbers is a critical practice, as it is in the financial statements that relevant information about the entity's performance is presented. It can be said that profit plays a central role, used for various purposes. Although there are already studies in the literature that demonstrate that international standards can improve the quality of accounting information (Barth et al., 2008). Other works clarify that the accounting standard has a limited role or even does not prevent discretionary actions, i.e., earnings management (Grecco, 2013; Joia & Nakao, 2014; Cardoso, Souza & Dantas, 2015; Rodrigues & Niyama, 2018).

## 2.2 O The New Revenue Recognition Standard CPC 47

Revenue is an important indicator in the financial analyzes carried out by companies. From this data measurement, companies assess whether their performance is in line with their strategic planning. Additionally, Dalkilic (2014) ratifies this understanding by clarifying that revenue is crucial for users of financial statements, as it allows assessing the performance as

well as the financial position of entities. Revenue is a metric of great importance for users and analysts to assess the prospects of companies (Cova, 2015).

It is worth mentioning that there were already studies before the implementation of the new standard that indicate possible effects on the financial statements as well as on their indicators. In this sense, Mota et al. (2012) pointed out possible impacts on the economic performance of companies, on their market value and on the cost of equity and/or third-party capital.

Consequently, the new accounting standard may also be reflected in the distribution of profits (Campos, 2017) and in different sectors of the company in addition to financial ones, such as business processes and internal controls. The adoption of the new standard even has the potential to affect companies' relationships with their customers and investors, hence the importance of establishing efficient revenue recognition policies and practices that ensure these stakeholders in their analysis (Cova, 2015).

Discussions on the guidelines for accounting for customer revenue are a challenge for regulators, as companies are different and allocated in different segments, which makes it difficult to structure and apply a single rule to deal with all the specificities of the businesses. From the effectiveness of the new accounting standard, there may also be qualitative changes such as better standardization, transparency, and comparability of practices between entities (Aquino, Iudícibus & Santos, 2019).

Although, initially, it may not seem like a profound change compared to previous standards, the level of detail regarding the application of concepts, especially in more complex transactions, is much greater than the guidance currently existing in IFRS (PWC, 2017).

CPC 47 (2016) determines that the entity must recognize revenues considering the transfer of goods or services promised to customers, considering the amount that the entity expects to be entitled to receive. The new standard has as a fundamental principle the recognition of revenue when goods or services are transferred to the customer based on the transaction price (PWC, 2017).

KPMG (2016) clarifies that the new accounting standard provides application guidance on several topics, including guarantees and licenses. Additionally, it provides guidance on when to capitalize costs of obtaining and fulfilling a contract, unless such costs are already within the scope of another accounting standard.

According to Aquino et al. (2019), this new model is a basis of principles and guidelines that determines a comprehensive structure of when to recognize revenue and the amount that should be recognized. If these criteria are met, revenue is recognized over time, to reflect the entity's performance; or at a specific moment in time, when control of the goods or services is transferred to the customer (KPMG, 2016).

CPC 47 (2016) determines that the accounting treatment of identification, recognition, measurement of revenue from a contract with a customer is structured in five steps, as follows: Step 1- identification of the contract; 2- identification of performance obligations; 3- determination of the transaction price; 4- allocation of transaction price to performance obligation and 5 - revenue recognition.

Therefore, according to PWC (2017), some sectors will suffer greater impacts than others, such as asset management, automotive, engineering and construction; entertainment and media; industrialized products and manufacturing; pharmaceuticals and biotechnology; properties; retail and consumer; information Technology; telecommunications. In the same sense, Cova (2015) had already clarified that this new standard would imply changes that could have little effect on some companies, while others would be more impacted.



Therefore, the new model, being more sophisticated, generates some changes in long-term and multi-element contracts (Weil, Schipper & Francis, 2016). As a result, service providers with these types of contracts tend to be more impacted, as a single contract can have several performance obligations.

Furthermore, as clarified by KPMG (2014), due to these multiple elements in a single contract, companies will have to evaluate each obligation and determine whether the revenue will be recognized at a specific moment or over time, according to the contractual term.

According to Almeida (2016), the moment to recognize revenue is one of the most subjective and important topics in accounting, as it should generate more difficulties in judgments and, mainly, in specific sectors. Additionally, revenue is an important performance indicator that influences the assessment of results and their distribution to shareholders. Thus, the new standard is more than an accounting change, it is a new mindset (Dalkilic, 2014).

### 2.3 Previous Studies

Reviewing the literature, it was found that there are studies that analyzed its effect on companies as described below.

Dani et al. (2017) verified the relationship between the quality of accounting information and the early adoption of IFRS 15 by Brazilian companies in the civil construction sector listed on B3. The research sample consists of 23 companies in the construction sector and the analysis was carried out in the period from 2013 to 2015 through multiple linear regression with panel data, using the value relevance model proposed by Ohlson (1995). According to the research findings, the results suggest that the early adoption of IFRS 15 helps to reduce the non-comparability bias and possible inconsistencies, since the previous standard, there were different criteria in construction contracts.

Trabelsi (2018) analyzed the effect of early adoption of IFRS 15 on the quality of accounting information on profit and equity. Financial indicators and statistical techniques were used according to information from the financial statements of companies in the real estate sector listed on the Dubai financial market in 2015. The results revealed that the transition approach most used by companies was the modified retrospective and that early adoption of IFRS 15 had a positive and significant effect on net income and that this effect can be explained by the increase in revenue and/or reduction in costs. Therefore, the study concludes that the voluntary adoption of any accounting method may reflect an opportunistic behavior by managers.

When deepening the analysis on the impacts of the accounting standard of revenue recognition on the quality of accounting information in specific sectors, the research by Baldissera et al. (2018), who verified the effect of CPC 17 on the earnings management of 29 Brazilian companies in the civil construction sector listed on B3 for the period from 2007 to 2012. The study used the KS (1995) model to estimate earnings management results by discretionary accruals and data analysis was performed by multiple linear regression with panel data as well as the non-parametric Mann-Whitney U mean difference test. The results showed that the earnings management levels of companies in the civil construction sector are decreasing after adopting the CPC 17 accounting standard.

Tutino et al. (2019) analyzed the impact on earnings management arising from the adoption of IFRS 15 of 23 listed Italian companies belonging to the telecommunications and public services sectors (sector of greater and lesser sensitivity, respectively) in the period from 2001 to 2017 and used the Jones model (1991). In this sense, the research concluded that among the companies that had the greatest impact from earnings management practices, most of them belong to the telecommunications sector. The ex-ante analysis of the standard carried out by the authors

contributes to an understanding of which sectors earnings management has the most impact and of possible predictions about choices that managers can make in view of the implementation of IFRS 15.

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Ribeiro, Barcelos and Costa (2020) investigated the economic impacts and the level of disclosure arising from the adoption of CPC 47 in Brazilian publicly traded companies. The study clarified through statistical analysis with non-parametric mean difference tests that the sectors most impacted respectively were communication, IT, public utilities, oil and gas, health, industrial goods, cyclical consumption, and non-cyclical consumption, totaling 34 impacted companies.

Oliveira, Crabbi and Rodrigues (2020) analyzed the level of adherence (Compliance) of Brazilian companies in the telecommunications sector listed on B3 to accounting pronouncement CPC 47. The analysis was performed using a checklist with the disclosure criteria defined as high level of compliance with CPC 47. The technique of content analysis of the consolidated financial statements in the years 2017 and 2018 was used. The results showed that no company presented a wide adherence to the new standard. Additionally, it was verified whether the companies already disclosed their information in accordance with the standard before it became mandatory, as a form of voluntary disclosure.

Braga (2020) aimed to analyze whether the adoption of IFRS 15 influenced the practice of earnings management by specific revenue accruals through a sample of 1116 companies from countries belonging to the acronym BRICS, classified in the sectors of telecommunications, software, engineering, construction and real estate, and the automotive sector, covering a time window from 2016 to 2018. The study used the model by Caylor (2010) that deals with the estimation of accruals specific to revenue management and two other models to measure the level of management based on of control and interest variables with sectors, countries and IFRS 15. Data were analyzed using multiple linear regression with panel data.

The results showed that the effectiveness of IFRS 15 positively influenced the revenue management practice, that is, from the adoption of the new revenue recognition standard, there was an increase in the levels of management by revenue accruals. In addition, the findings revealed that the effects of IFRS 15 differ according to the country and sector, but with a significant difference in China in the engineering, construction, and real estate sector.

Napier and Stadler (2020) analyzed various effects, such as accounting, information, and capital markets, resulting from the application of IFRS 15 in the largest European firms through a review of corporate annual reports, comment letters and interviews. In the analysis, the authors defined a frame of reference that establishes the different types of effect that a new accounting requirement can induce, including additional impacts. In examining the 2018 reports, a total of 48 companies from the Stoxx Europe 50 from 14 different sectors were selected. The study concluded that the accounting impact of revenue recognition and measurement, except for a few sectors, especially telecommunications, was small.

Therefore, according to a review of the exposed literature, the following research hypothesis was defined: The adoption of Technical Pronouncement CPC 47 - Revenue from Contract with Customers increased the levels of earnings management and, therefore, reduced the quality of accounting information.

### 3 Methodology

#### 3.1 Population and Sample

To solve the problem and achieve the proposed objective, descriptive research was conducted in relation to the objectives, since we sought to explain the formation of a phenomenon (results management) through the relationship between variables (discretionary accruals; b) bibliographic and documentary regarding the procedures, because bibliographic sources were used to the development of the theoretical framework and data from a database that will serve to calculate the variables used in the models, respectively (Gil, 2010).

The research population is composed of companies listed in B3 in the time lapse from 2012 to 2021. The period prior to CPC 47 was considered the fiscal years from 2012 to 2017 and the period after 2018 to 2021. The operationalization data were collected in the Economática® database.

In a population of 410 companies, 64 were classified as financial institutions and have specific accounting treatment. We also excluded 139, who did not present data necessary for the calculation of the research variables, and thus, not allowing the formation of a balanced panel and the chronological follow-up of the study. Thus, a final sample of 207 companies was reached. The selection of the number of companies that make up the final sample was for convenience and in a non-probabilistic manner.

#### 3.2 Operationalization and Specification of Models

To estimate discretionary accruals (regression residuals), the model developed by Dechow et al. (2012), used by Martins, Paulo and Monte (2016), and Boina and Macedo (2018), described in Equation 1, was applied.

$$ACC_{i,t} = \beta_0 + \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta REC_{i,t} - \Delta CR_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{IMOB_{i,t}}{A_{i,t-1}} \right) + \beta_4 \left( \frac{ACC_{i,t-1}}{A_{i,t-2}} \right) + \varepsilon_{i,t} \quad (1)$$

Where:  $ACC_{i,t}$  = total accruals of company  $i$  in period  $t$ , weighted by its total assets of company  $i$  at the end of period  $t-1$ ;  $A_{i,t-1}$  = total assets of company  $i$  at the end of period  $t-1$ ;  $REC_{i,t}$  = change in net revenues of company  $i$  between periods  $t-1$  and  $t$ , weighted by the total assets of company  $i$  at the end of period  $t-1$ ;  $CR_{i,t}$  = variation in accounts receivable from company  $i$  between periods  $t-1$  and  $t$ , weighted by the total assets of company  $i$  at the end of period  $t-1$ ;  $IMOB_{i,t}$  = balance of fixed assets and deferred assets of company  $i$  in period  $t$ , weighted by the total assets of company  $i$  at the end of period

t-1;  $ACC_{i,t-1}$  = are the total accruals of company i in period t-1, weighted by the total assets of company i at the end of period t-2;  $\beta_0$  = linear coefficient;  $\beta_{1,2,3,n}$  = angular coefficients;  $\varepsilon_{i,t}$  = regression residuals.

The estimation models of discretionary accruals of total accumulations present limitations, such as possible inconsistencies in the omission of data or even insufficient inferences (Almeida, 2008). In this sense, the model of Dechow et al. (2012) is a more up-to-date version of one of the most used models in studies on results management, the Modified Jones model (Dechow et al., 2012).

The model of Dechow et al. (2012) can be considered more complete, because it included the intercept in the equation and the discretionary accruals laid to capture the reversal of accruals from the current period (Martins et al., 2016).

To perform a complementary analysis and inferences with a greater degree of robustness, the Kothari et al. model (2005) was also applied to estimate the discretionary accruals (regression residuals), used by Melo and Lamounier (2020) and described in equation 2 below.

$$ACC_{i,t} = \beta_0 + \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta REC_{i,t} - \Delta CR_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{IMOB_{i,t}}{A_{i,t-1}} \right) + \beta_4 ROA_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

Where:  $ACC_{i,t}$  = total accruals of company i in period t, weighted by the total assets of company i at the end of period t-1;  $A_{i,t-1}$  = total asset of company i at the end of the t-1 period;  $REC_{i,t}$  = variation in net revenues of company i between periods t-1 and t, weighted by the total assets of company i at the end of period t-1;  $CR_{i,t}$  = variation in accounts receivable from company i between periods t-1 and t, weighted by the total assets of company i at the end of period t-1;  $IMOB_{i,t}$  = balance of the accounts of fixed assets and deferred assets of company i in period t, weighted by the total assets of company i at the end of period t-1;  $ROA_{i,t-1}$  = return on the assets of company i in the period t-1;  $\beta_0$  = linear coefficient;  $\beta_{1,2,3,n}$  = angular coefficients;  $\varepsilon_{i,t}$  = regression error term.

The model of Kothari et al. (2005) is known as the Performance-Matching model, because through it is possible to insert the performance of companies in the calculation of accruals. In this version, the authors started from the Jones (1991) and Modified Jones (1995) model and added the return over asset variable, which has the function of controlling the performance of the companies contained in the sample.

Thus, the influence of the performance of companies in the calculation of discretionary accruals is mitigated. The impact on results management from abnormal performance results in a greater chance of misclassifying non-discretionary accruals in discretionary (Melo & Lamounier, 2020). To estimate the total accruals in both models, the cash flow approach was used (Hribar & Collins, 2002; Paulo, Martins & Corrar, 2007), described in equation 3 below.

$$ACC_{i,t} = LL_{i,t} - FCO_{i,t} \quad (3)$$

Where:  $ACC_{i,t}$  = total accruals of company i in period t;  $LL_{i,t}$  = profit or loss for the year of company i in period t;  $FCO_{i,t}$  = operating cash flow of the company i at time t.

Then, a multiple linear regression was performed with a dummy variable to identify the effect of CPC 47 on discretionary accumulation (regression residuals referring to the models of Dechow et al. (2012) and Kothari et al. (2005), in which a significant relationship is expected. In addition, a dummy was included to control the effects of the COVID-19 pandemic. The pandemic generated by the coronavirus resulted in widespread impacts that led to a scenario of uncertainty in compliance with the terms of the contract, both by companies and customers, affecting the existence, modification, or recognition of revenues (KPMG, 2020).

It is noteworthy that it was not considered a dummy to control the early and voluntary adoption of CPC 47, since from an analysis of the explanatory notes of the companies contained in the sample, it was found that most of them chose only to apply the standard from 2018, the year of mandatory adoption.

The model of this research is described in equation 4 and table 2 clarifies the independent variables already identified in the literature.

$$* Gr_{i,t} = \beta_0 + \beta_1 END_{i,t} + \beta_2 ROA_{i,t} + \beta_3 FCO_{i,t} + \beta_4 TAM_{i,t} + \beta_5 CPC47_{i,t} + \beta_6 COVID19_{i,t} + \varepsilon_{it} \quad (4)$$

Where:  $Gr_{i,t}$  is the earnings management (Residuals of Dechow et al. (2012) regression) of company  $i$  in period  $t$ ;  $END_{i,t}$  is the debt of company  $i$  in period  $t$ ;  $ROA_{i,t}$  is the return on the asset of the company  $i$  in the period  $t$ ;  $FCO_{i,t}$  is the operating cash flow of company  $i$  in period  $t$ ;  $TAM_{i,t}$  is the size of the company  $i$  in the  $t$  period;  $CPC47_{i,t}$  is the dummy variable, 1 for periods after company CPC 47  $i$  in time  $t$  and 0 for the others;  $COVID19_{i,t}$  is the dummy variable referring to the coronavirus pandemic period, 1 for periods with COVID-19 of company  $i$  at time  $t$  and 0 for the others;  $\beta_0$  = linear coefficient;  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  = angular coefficients;  $\varepsilon_{it}$  = regression residuals. \*Absolute value of residuals.

**Table 2**

*Independent variables*

Variables	Operationalization and metrics	References
Debt ( $END_{i,t}$ )	END = Total Debt/ Total Assets	Joia e Nakao (2014); Baldissera <i>et al.</i> (2018).
Return on Assets ( $ROA_{i,t}$ )	ROA = Net Income/ Total Assets	Joia e Nakao (2014); Baldissera <i>et al.</i> (2018)
Operating Cash Flow ( $FCO_{i,t}$ )	FCO = Operating cash flow proportional to total assets	Joia e Nakao (2014); Baldissera <i>et al.</i> (2018).
Company Size ( $TAM_{i,t}$ )	Natural logarithm of total asset TAM= Ln (Total Asset)	Joia e Nakao (2014); Baldissera <i>et al.</i> (2018); Prata e Flach (2021).
Dummy variable ( $CPC47_{i,t}$ )	Dummy, 1 for periods after CPC 47 and 0 for others	Joia e Nakao (2014); Baldissera <i>et al.</i> (2018).
Dummy variable ( $COVID19_{i,t}$ )	Dummy, 1 for periods with COVID-19 and 0 for others	Šušak (2020); Girão, Duarte, Martins e Souza (2020); Araújo e Rodrigues (2022); Santos, Carmo e Rech (2022); Yassin, Al-Shaban, Sraheen e Daoud (2022).

Source: Research data (2022).

The choice of panel data for the regressions used in the study was made to perform the chronological monitoring of the companies present in the sample. According to Gujarati and Porter (2011), with panel data it is possible to examine the behavior of each company over time, that is, a dimension of space and time, besides ensuring a greater amount of informative data, greater variability, lower linearity between variables, greater efficiency in estimates and a broader control over heterogeneity. The panel is of the balanced type, because each company has the same number of observations (Gujarati & Porter, 2011).

After performing the regressions, all assumptions were verified. The regressions and their assumptions were operationalized with the help of Gretl® software, always at the significance level of 5%, according to the researchers' judgment.

The analysis of the normality of the residues was performed by the Doornik-Hansen test, according to the teachings of Adkins (2009), because it presents better performance in small samples.

The null hypothesis considers that the sample tends to a normal distribution and the alternative hypothesis considers that the sample does not tend to one the normal distribution.

It is noteworthy that according to Gujarati and Porter (2011), if normality is not met, this fact would not be considered a problem, given that it can be relaxed before the Central Limit Theory. The multilinearity of the variables was analyzed by the Variance Inflation Factor (VIF) test. All independent variables must present values below 10, a parameter used by Gujarati and Porter (2011), which means that they do not have a high degree of relationship with each other.

According to the previous analysis, the fixed effects method was adequate to the model and, thus, the autocorrelation of the data in the panel was verified by means of the Wooldridge test, as indicated by Drukker (2003). According to Gujarati and Porter (2011), this assumption is that the error term of one observation does not suffer interference by the error term of another observation. If residual autocorrelation problems are observed, robust correction is applied to correct inconsistencies.

## 4 Results and Analyses

### 4.1 Analysis of discretionary Accruals from Dechow et al. (2012) and Kothari et al. (2005)

First, it is worth mentioning that all models used in this research did not meet the assumptions of normality and homoscedasticity of the residues; did not obtain incidence of multicollinearity according to the Gujarati and porter rule (2011); and did not present autocorrelated residues. In all cases where these assumptions were not met, corrective measures were applied as presented in the methodology.

Initially, all relevant variables were collected to estimate discretionary accruals according to the definition of Dechow et al. (2012) and Kothari et al. (2005). Then, the panel diagnosis was performed to verify which model is most appropriate for the analysis of earnings management. The analysis of the Chow (p-value of 0.000), Hausman (p-value 0.000) and Breusch-Pagan (p-value 0.000) tests leads to the rejection of null hypotheses at a significance level of 5% and points out that the most appropriate method for the model is the one with fixed effects.

The evidence with the results of the regression of the panel data of the model to estimate the discretionary accruals are presented in tables 3 and 4 below.

**Table 3**

*Results of linear regression - Dechow et al. (2012) Fixed Effects*

$ACC_{i,t} = \beta_0 + \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta REC_{i,t} - \Delta CR_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{IMOB_{i,t}}{A_{i,t-1}} \right) + \beta_4 \left( \frac{ACC_{i,t-1}}{A_{i,t-2}} \right) + \varepsilon_{i,t} \quad (1)$					
<b>Linear Regression</b>			Observations	2070	
			Prob > F	0,000	
			R-squared	0,253	
			Normality	0,000	
ACC <sub>it</sub>	Coef.	Robust Standard Errors	t	P> t	VIF
1/AT <sub>it-1</sub>	4703,18	2230,50	2,109	0,0362	1,001
ΔRec <sub>it</sub> -ΔCR <sub>it</sub>	0,094	0,032	2,957	0,004*	1,001
IMOB <sub>it</sub>	0,042	0,100	0,042	0,674	1,002
ACC <sub>it-2</sub>	0,001	0,000	6,932	0,000*	1,001
Constant	-0,078	0,030	-2,566	0,011*	

**Source:** Research data (2022). \*5% Statistically significant.

It was verified that the variables  $\Delta\text{Rec}_{it}$ - $\Delta\text{CR}_{it}$  and  $\text{ACC}_{it-2}$  presented statistical significance and coefficients 0.094 and 0.001, respectively. Therefore, it can be observed that these variables interfere with the total accruals ( $\text{ACC}_{it}$ ) and that, on average, the increase of one unit in these variables would imply an increase of 0.094 and 0.001 units of these accruals. Additionally, it was observed that the variables of the model explain 25.30% of the behavior of the dependent variable.

**Table 4**

*Results of linear regression – Kothari et al. (2005) Fixed Effects*

$$\text{ACC}_{i,t} = \beta_0 + \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta\text{REC}_{i,t} - \Delta\text{CR}_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{\text{IMOB}_{i,t}}{A_{i,t-1}} \right) + \beta_4 \text{ROA}_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

<b>Linear Regression</b>		Observations	2070		
		Prob > F	0,000		
		R-squared	0,259		
		Normality	0,000		
<b>ACC<sub>it</sub></b>	<b>Coef.</b>	<b>Robust Standard Errors</b>	<b>t</b>	<b>P&gt; t </b>	<b>VIF</b>
1/AT <sub>it-1</sub>	5832,36	2437,53	2,393	0,018*	1,045
$\Delta\text{Rec}_{it}$ - $\Delta\text{CR}_{it}$	0,084	0,033	2,524	0,012*	1,032
IMOB <sub>it</sub>	0,034	0,098	0,350	0,727	1,004
ROA <sub>it</sub>	0,120	0,070	1,711	0,089	1,077
Constant	-0,077	0,030	-2,525	0,0123*	

**Source:** Research data (2022). \*5% Statistically significant.

It was verified that the inverse of the total lanot asset and the variation between revenues and accounts receivable presented statistical significance and coefficients 5832.36 and 0.084, respectively. Therefore, it is evident that these variables interfere with the total accruals ( $\text{ACC}_{it}$ ) and that, on average, the increase of one unit in these variables would imply an increase of 5832.36 and 0.084 units of these accruals.

## 4.2 Analysis of Earnings Management by the Research Model

Descriptive statistics were analyzed, presenting the mean, standard deviation, minimum and maximum from the model variables, evidenced in table 5.

**Table 5**

*Descriptive Statistics – Proposed Earnings Management Model with residuals of [Kothari et al. (2005) and Dechow et al. (2012)]*

Variable	Obs.	Mean	Standard Deviation	Min.	Max.
*GRKT	2070	0,075	0,133	0,000	3,053
**GRDW	2070	0,076	0,133	0,000	3,033
END	2070	0,800	0,819	0,004	9,548
ROA	2070	-0,000	0,177	-2,261	1,104
FCO	2070	0,058	0,104	-1,868	0,800
TAM	2070	14,87	1,944	9,625	20,711

**Fonte:** *Research data (2022).* \*GRKT - absolute value of residuals Kothari *et al.* (2005) \*\*GRDW - absolute value of residuals Dechow *et al.* (2012).

According to table 5, there are relevant variations between the maximum and minimum values, which allows us to observe that there are companies with different sizes in the survey sampling. Additionally, we can see that the FCO variable presented the lowest standard deviation of the sample, which means that it is less dispersed, that is, it varies less and is closer to homogeneity. On the other hand, the size variable presents the largest standard deviation of the sample, therefore, more dispersed, and less close to homogeneity.

Descriptive statistics were followed by panel diagnosis to verify which model is most appropriate for results management analysis. The analysis of the Chow (p-value of 0.000), Hausman (p-value 0.000) and Breusch-Pagan (p-value 0.000) tests leads to the rejection of null hypotheses at a significance level of 5% and points out that the most appropriate method for the model is the one with fixed effects.

The evidence with the results of the regression of the panel data of the model to estimate the discretionary accruals is presented in table 6.



**Table 6**

*Linear regression results of the earnings management model – Fixed Effects [Dechow et al. (2012) Residuals]*

$Gr_{i,t} = \beta_0 + \beta_1 END_{i,t} + \beta_2 ROA_{i,t} + \beta_3 FCO_{i,t} + \beta_4 TAM_{i,t} + \beta_5 CPC47_{i,t} + \beta_6 COVID19_{i,t} + \varepsilon_{it} \quad (4)$					
<b>Linear Regression</b>			Observations	2070	
			Prob > F	0,000	
			R-squared	0,339	
			Normality	0,000	
<b>**GR</b>	<b>Coef.</b>	<b>Robust Standard Errors</b>	<b>T</b>	<b>P&gt;[t]</b>	<b>VIF</b>
END <sub>it</sub>	0,048	0,021	2,227	0,027*	1,520
ROA <sub>it</sub>	0,024	0,060	0,4067	0,685	1,458
FCO <sub>it</sub>	-0,136	0,057	-2,374	0,019*	1,065
TAM <sub>it</sub>	0,014	0,013	1,102	0,272	1,115
CPC 47 <sub>it</sub>	-0,004	0,008	-0,4780	0,633	1,610
COVID19 <sub>it</sub>	0,013	0,008	1,708	0,089	1,610
Constant	-0,169	0,203	-0,8334	0,405	

**Source:** Research data (2022). \*5% Statistically significant; \*\*Absolute value of residuals.

It was verified that the variables END and FCO presented statistical significance and coefficients 0.048 and -0.136, respectively. Therefore, it is observed that these variables interfere with the total accruals (ACC<sub>it</sub>). On average, the increase of a unit of EDT would imply an increase of 0.048 units of these accruals, while the increase of an FCO unit would imply a decrease of 0.136 units. Additionally, it was observed that the variables of the model explain 33.90% of the behavior of the dependent variable.

From the panel diagnosis, it was verified which model was most appropriate for the analysis of results management. The analysis of the Chow (p-value of 0.000), Hausman (p-value 0.000) and Breusch-Pagan (p-value 0.000) tests leads to the rejection of null hypotheses at a significance level of 5% and points out that the most appropriate method for the model is the one with fixed effects.

The evidence with the results of the regression of the panel data of the model to estimate the discretionary accruals is presented in table 7 below.

**Table 7**

*Linear regression results of the earnings management model – Fixed Effects [Kothari et al. (2005) Residuals]*

$Gr_{i,t} = \beta_0 + \beta_1 END_{i,t} + \beta_2 ROA_{i,t} + \beta_3 FCO_{i,t} + \beta_4 TAM_{i,t} + \beta_5 CPC47_{i,t} + \beta_6 COVID19_{i,t} + \varepsilon_{it} (4)$					
<b>Linear Regression</b>			Observations	2070	
			Prob > F	0,000	
			R-squared	0,339	
			Normality	0,000	
<b>**GR</b>	<b>Coef.</b>	<b>Robust Standard Errors</b>	<b>t</b>	<b>P&gt; t </b>	<b>VIF</b>
END <sub>it</sub>	0,043	0,023	1,864	0,064	1,520
ROA <sub>it</sub>	0,038	0,061	0,6181	0,537	1,458
FCO <sub>it</sub>	-0,148	0,062	-2,398	0,017*	1,065
TAM <sub>it</sub>	0,010	0,014	0,702	0,483	1,115
CPC 47 <sub>it</sub>	-0,003	0,008	-0,366	0,715	1,610
COVID19 <sub>it</sub>	0,014	0,008	1,789	0,075	1,610
Constant	-0,094	0,211	-0,446	0,656	

**Source:** Research data (2022). \*5% Statistically significant; \*\*Absolute value of residuals.

It was verified that the variable operational cash flow presented statistical significance and coefficient -0.148. Therefore, it is confirmed that these variables interfere with the total accruals (ACC<sub>it</sub>) and that, on average, the increase of one unit in these variables would imply a decrease of 0.148 units of these accruals. Additionally, it was observed that the variables of the model explain 33.90% of the behavior of the dependent variable. Therefore, from this result, it is observed that as observed in the empirical models, the two models used in this research also have the power of explanation very close to the same sample.

Tables 6 and 7 with the results of the research models show p-values far from zero, and it is possible to verify that the variables: size, return on assets, CPC 47 and Covid-19 cannot explain the behavior of the dependent variable, that is, discretionary accruals or results management.

Therefore, this non-significant result of the variables size, return on assets are in line with the findings of Baldissera et al. (2018), but opposite the results of Joia and Nakao (2014); Grecco (2013), Braga (2020) and Prata and Flach (2021) which have a positive and significant relationship in these coefficients. In the variable operating cash flow presented significant results and, therefore, negatively influences the management contrary to the findings of Joia and Nakao (2014) and Baldissera et al. (2018). It was found that in the two research models presented in tables 6 and 7 that operating cash flow negatively influences the earnings management

Regarding studies on the effects of coronavirus on the quality of accounting information, Šušak (2020) found that the pandemic also had effects on the relationship between earnings management and the timing of financial statements. Girão et al. (2020) explain that during the pandemic period there was manipulation to increase profits. According to the study by Araújo and Rodrigues (2022), the variable of interest Covid-19 was significantly and negatively related to earnings management. While Oliveira and Modena (2022) pointed out that the pandemic exerts a positive and significant influence for opportunistic practice of manipulating the results.

In this research, the Covid-19 dummy has no statistical significance, contrasting the results of the previously cited studies. It is noteworthy that these studies used different management models and samples and, as a result, changes in the results may have occurred.

In the study by Baldissera et al. (2018), the authors identified that the CPC 17 standard (prior to CPC 47) negatively influenced the results management of construction companies and suggested that CPC 47 could increase the levels of results management, reinforcing the need for further studies after implementation of the new accounting standard.

However, this research found that the new standard did not significantly influence the discretionary practice of results management in B3 companies, against to the study by Braga (2020), which made an analysis of the practice of revenue management from other sectors, periods, and national and international companies. Braga (2020) foi de encontro aos achados de Morawska (2021) que não identificou impacto da IFRS 15 nos níveis de gerenciamento de receitas nas empresas da Polônia. Braga (2020) was in line with the findings of Morawska (2021) who did not identify the impact of IFRS 15 on revenue management levels in Polish companies.

However, Braga (2020) also did not identify significant impacts of the new accounting standard of revenue recognition in the level of revenue management in Brazilian companies belonging to specific sectors such as telecommunications, software, engineering, construction and real estate, and the automotive sector. In additional tests, this research did not identify changes in the levels of results management when performed in the sector-separated sample.

## 5 Final Considerations

The aim of this study was to analyze the effects of the adoption of CPC 47 on the results management of Brazilian companies listed in B3. To achieve this, a descriptive, bibliographic, and documentary research was carried out with a quantitative approach. The selected sample was 207 companies from 2012 to 2021, totaling 2070 observations.

It was hypothesized that the adoption of the accounting standard CPC 47 - Revenue from contract with client would increase the levels of results management and, therefore, would negatively affect the quality of accounting information. However, according to the analysis of the results, the evidence indicated that the adoption of CPC 47 did not impact the level of results management, not confirming the notes of the study by Rutledge et al. (2016).

The findings of this study reveal that there was no influence of the new accounting standard on the level of results management since the variable dummy CPC 47 did not obtain statistical significance. A possible cause of this effect may be related to the fact that CPC 47 has not had as many relevant impacts on numbers, contract changes, business model, and how to recognize revenue from the previous standard. Thus, a reduction in the quality of accounting information was not identified.

The results of this study contribute and expand the discussion about the effect of an accounting standard on the quality of accounting information, mainly from the perspective of results management and the new standard of revenue recognition. In a practical way, this study becomes relevant for auditors, assists in the process of containment of management practices, given the role of the auditor in verifying the authenticity of the financial statements, thus increasing the improvement in the quality of the independent audit.

For regulatory agencies, it is expected that the findings of this study with the others can encourage the agencies in the evaluation of the current accounting system, to develop devices to reduce management practices. For shareholders and investors in general, knowledge of the behavior of a sample of the Brazilian capital market helps in making decisions considering the whole market.

Like other studies, this research has limitations, since the models that evaluate the management of results are performed based on regression errors, and, therefore, there may be distortions of the results, as they are estimates. Another limitation is that the new accounting standard entered into force from 2018, restricting data collection and analysis until 2021.

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For future research, it is suggested the expansion of the sample with a greater time lapse with quarters and other management models with specific accruals, including in the analysis other control and interest variables, such as a dummy for differentiation of sectors. In addition, the impact of the coronavirus pandemic on the financial statements can be evaluated, especially in Brazilian companies that had a significant impact with the adoption of the new accounting standard.

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